

“Ultrasound image focusing method and relative ultrasound system”

Abstract

5 The method comprises the phases of: sending a series of excitation ultrasonic
signals to a volume being investigated, by means of an array of transducers aligned in a
transverse direction (x), said ultrasonic signals propagating in depth in said volume
according to a direction of propagation (y); acquiring, by means of said transducers,
10 signals reflected from reflectors located in the volume being investigated; performing
on said reflected signals a transform in the transverse direction from a spatial domain
(x,y), defined by said transverse direction (x) and by said direction of propagation (y), to
a first transformed domain; applying, in the transformed domain, a two-dimensional
transformation, to straighten every curved image ($Ip1, Ip2, Ip3$) of a reflector in said
15 volume being investigated and make it essentially orthogonal to the direction of
propagation (y); compressing, in the transverse direction (x) each of the straightened
curves ($Im1, Im2, Im3$) to concentrate said straightened image in a zone centered at the
level of the position of said reflector along said transverse direction (x).

(Fig.12)

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